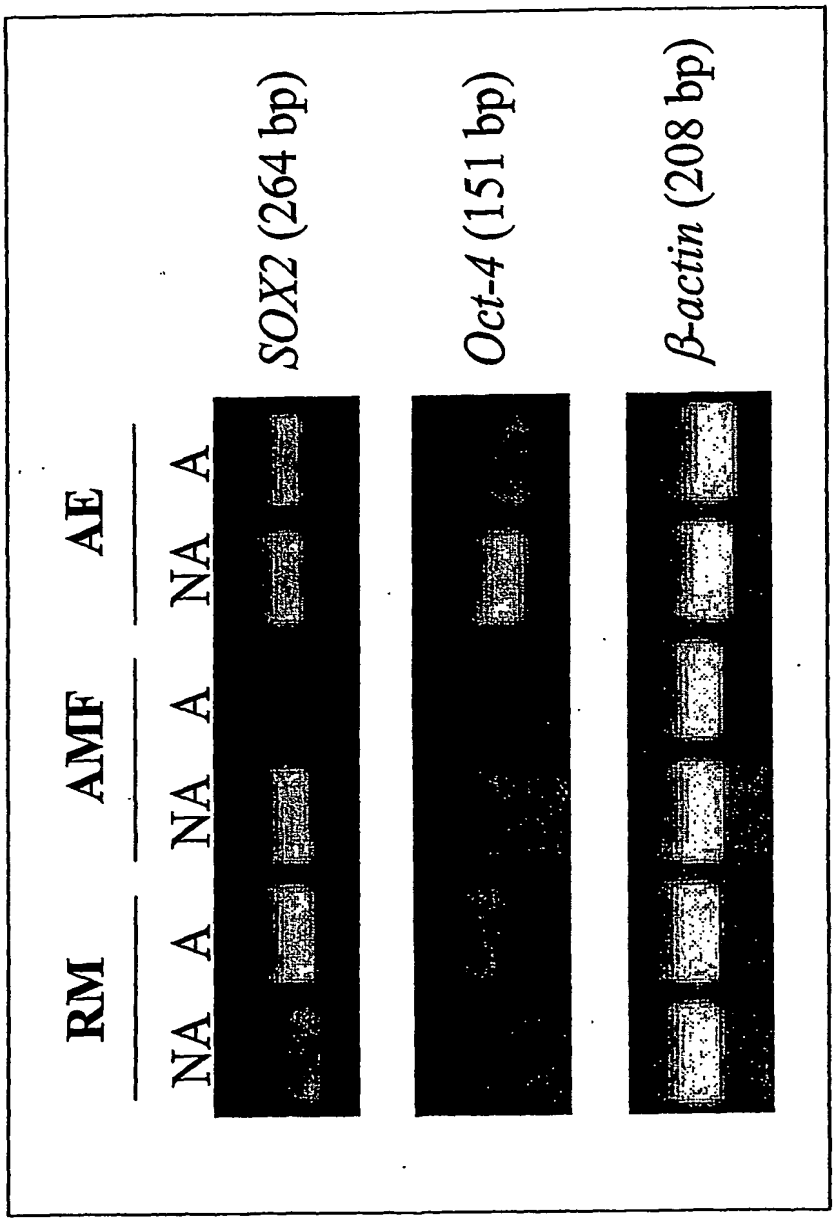

NA: Nonadherent cells
A: Adhered cells on dish
RM: Cells from Remaining Placental Tissue
AMF: Amniotic Fibroblasts
AE:Amniotic Epithelial Cells

Figure 1

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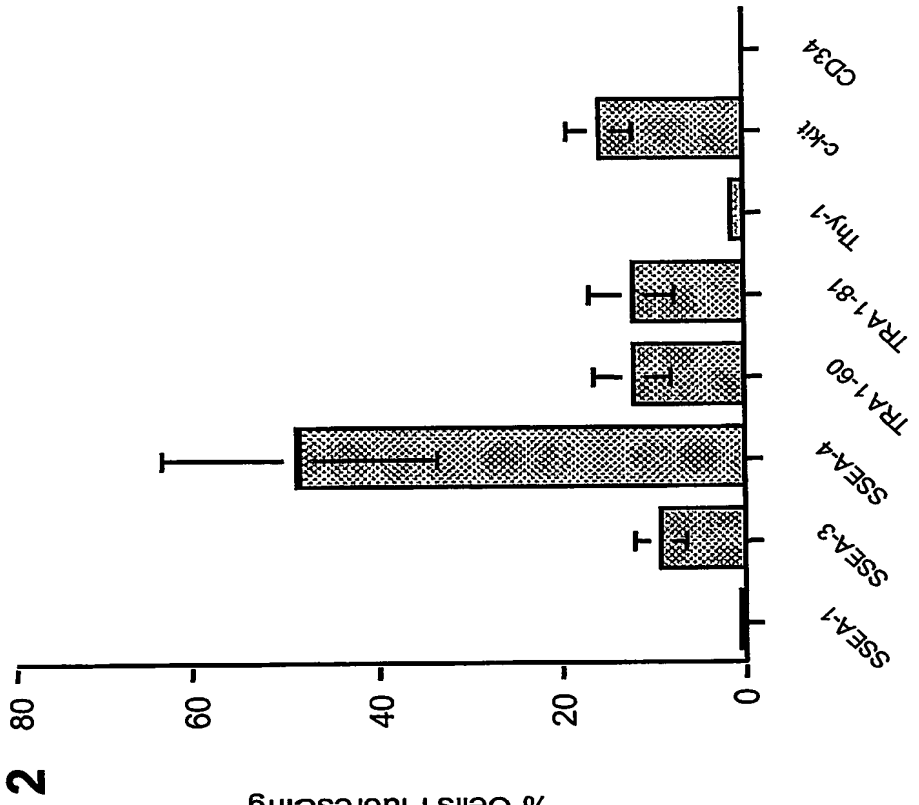

% Cells Fluorescing
0
20
40
60
80
SSEA-1
SSEA-3
SSEA-4
TRA 1-60
TRA 1-81
Thy-1
c-kit
CD34

Figure 2

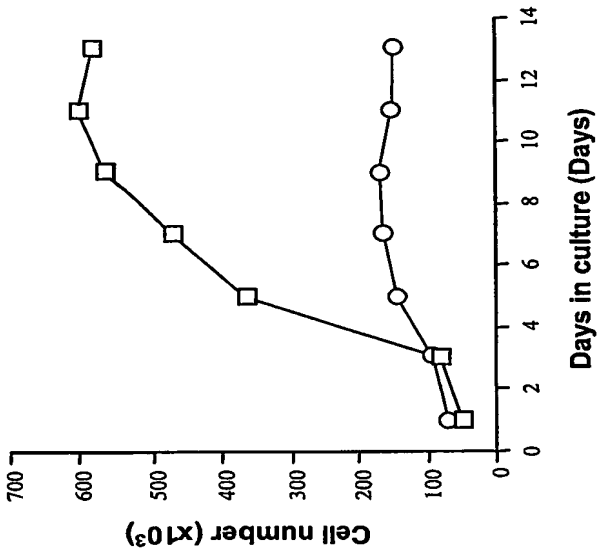

Cell number (x10³)
700
600
500
400
300
200
100
0
0
2
4
6
8
10
12
14
Days in culture (Days)

Figure 3

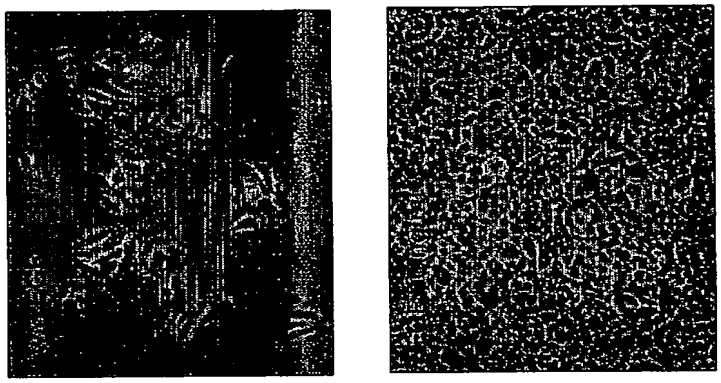


Figure 4

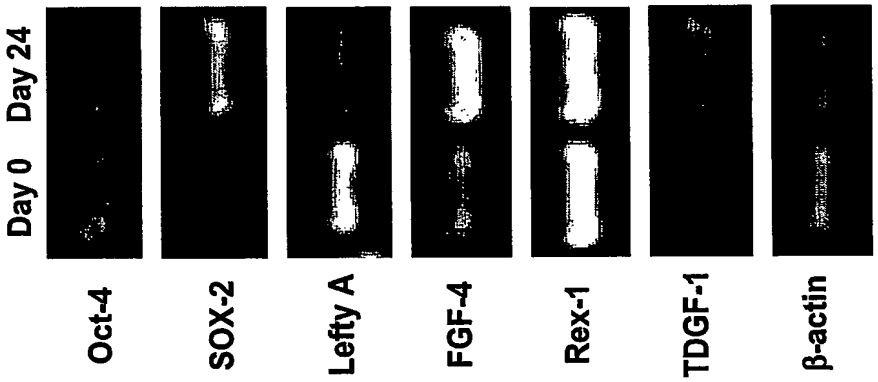
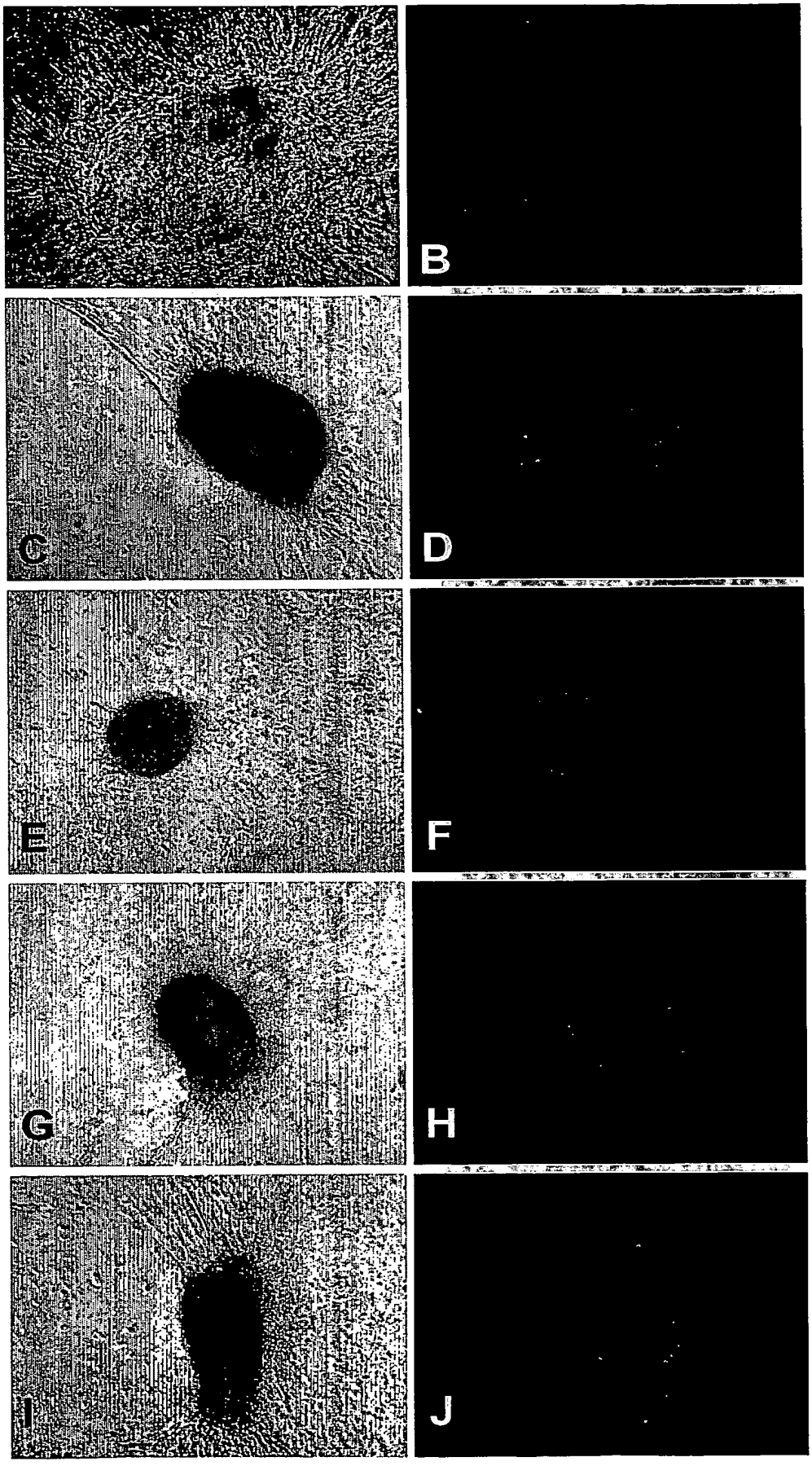


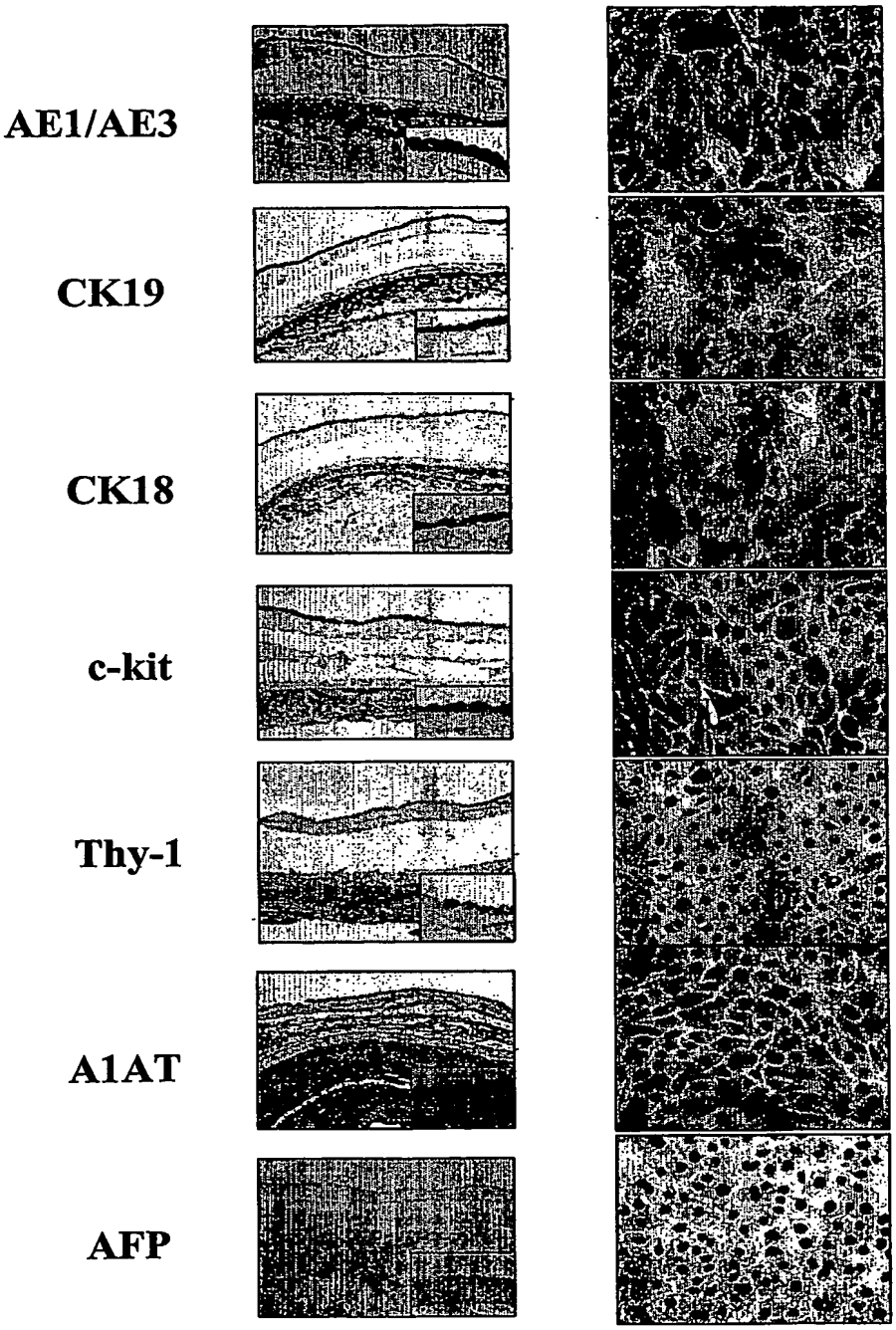
Figure 5

Figure 6



Scale bar
100 μm

Figure 7



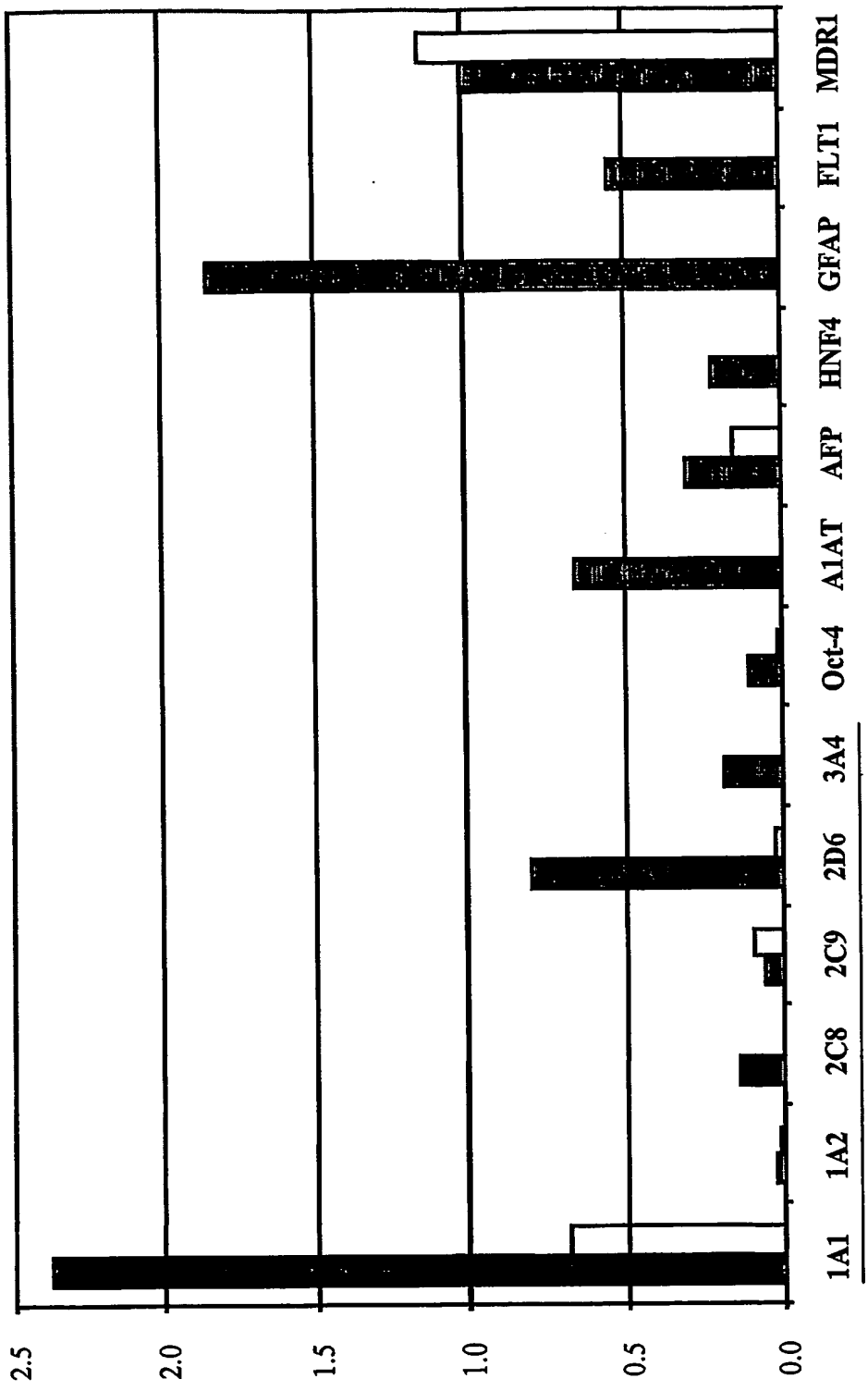

2.5
2.0
1.5
1.0
0.5
0.0
1A1
1A2
2C8
2C9
2D6
3A4
Oct-4
A1AT
AFP
HNF4
GFAP
FLT1
MDR1
CYP 450
Conditions and Methods of:
Present Invention
Sakuragawa et al.
(J Hum Genet.
45:171-176, (2000))

Figure 8

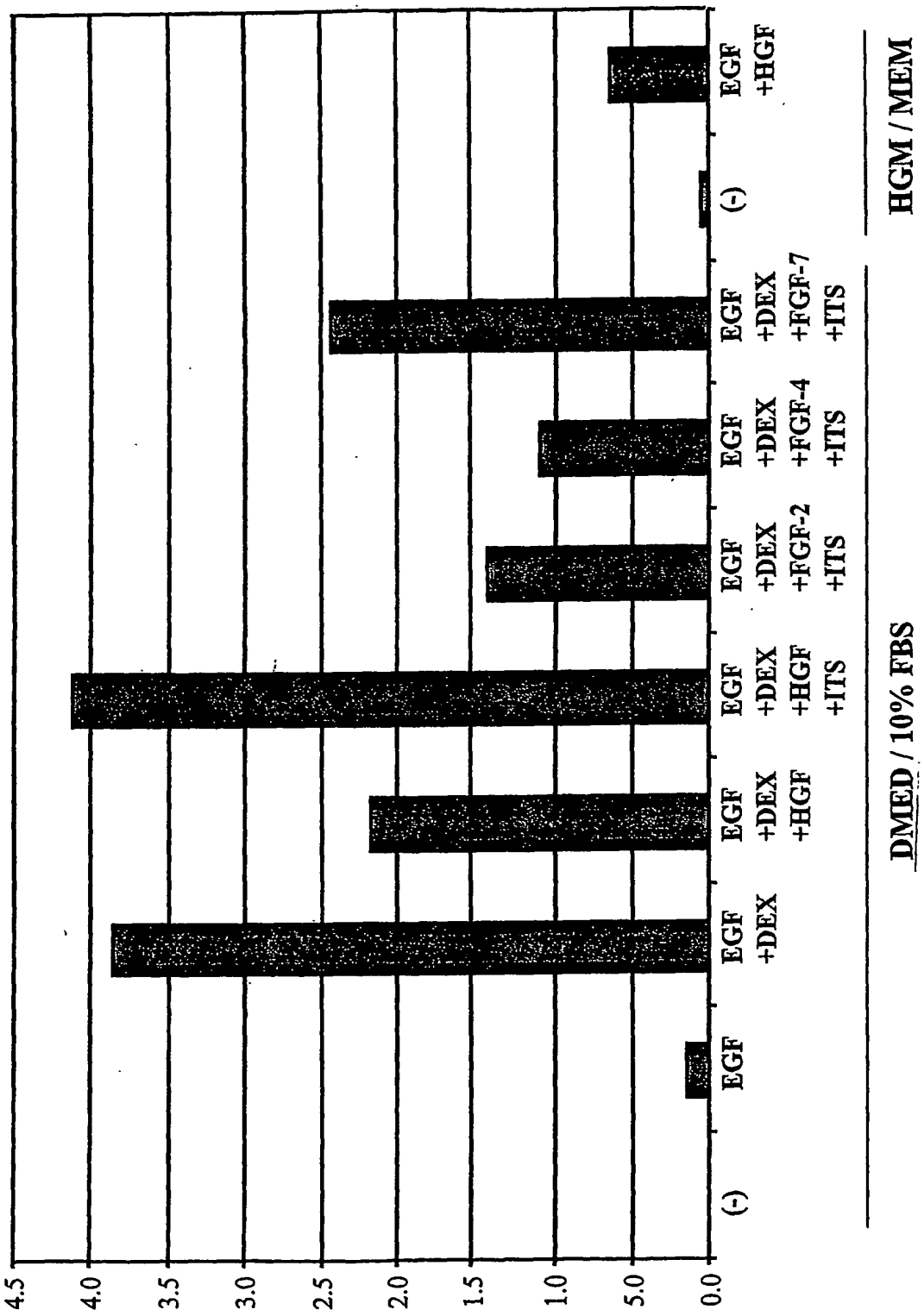

4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
5.0
0.0
(-)
EGF
EGF +DEX
EGF +DEX +HGF
EGF +DEX +HGF +ITS
EGF +DEX +FGF-2 +ITS
EGF +DEX +FGF-4 +ITS
EGF +DEX +FGF-7 +ITS
(-)
EGF +HGF
DMEM / 10% FBS
HGM / MEM

Figure 9

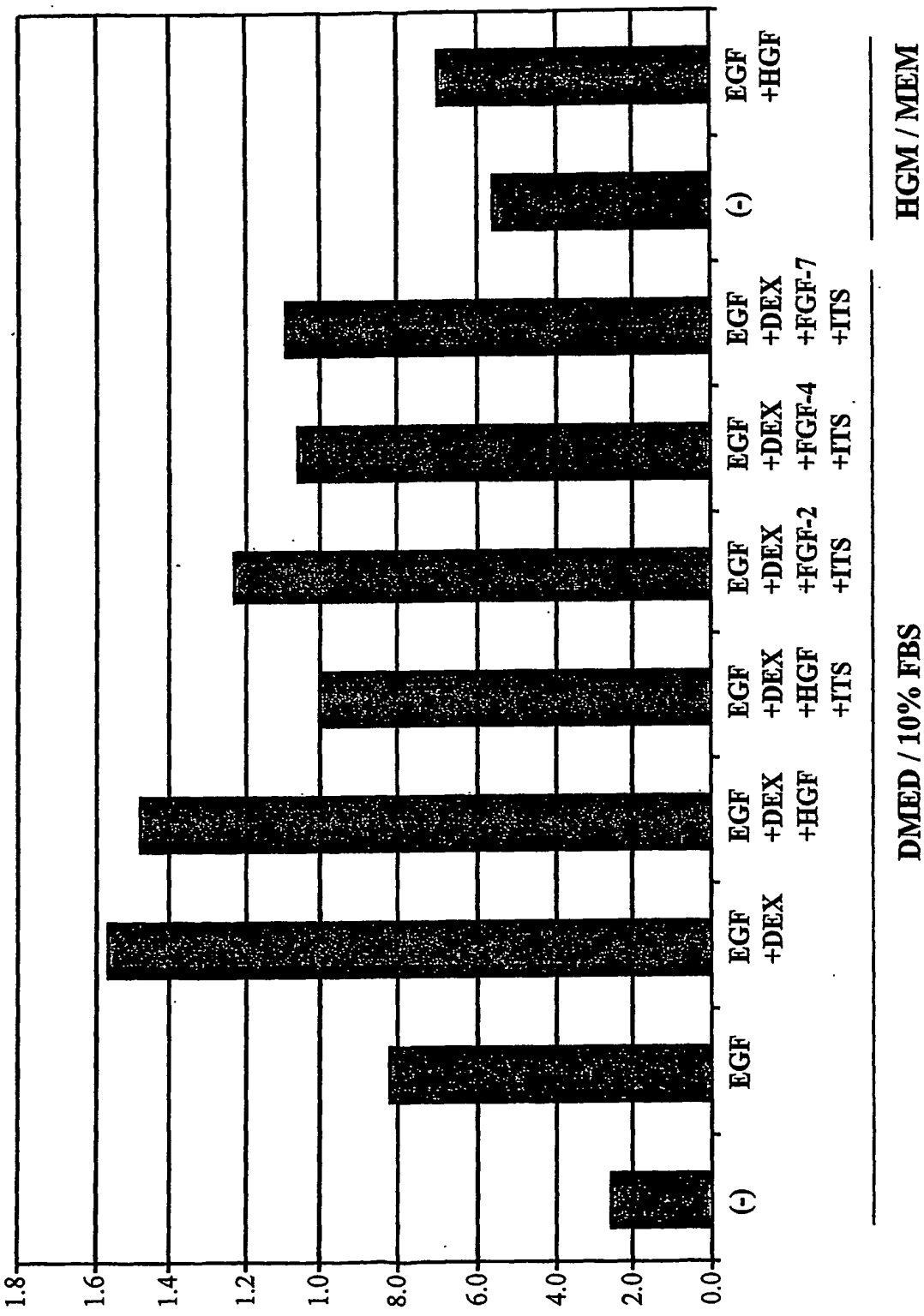

1.8
1.6
1.4
1.2
1.0
8.0
6.0
4.0
2.0
0.0
(-)
EGF
EGF +DEX
EGF +DEX +HGF
EGF +DEX +HGF +ITS
EGF +DEX +FGF-2 +ITS
EGF +DEX +FGF-4 +ITS
EGF +DEX +FGF-7 +ITS
(-)
EGF +HGF
DMED / 10% FBS
HGM / MEM

Figure 10

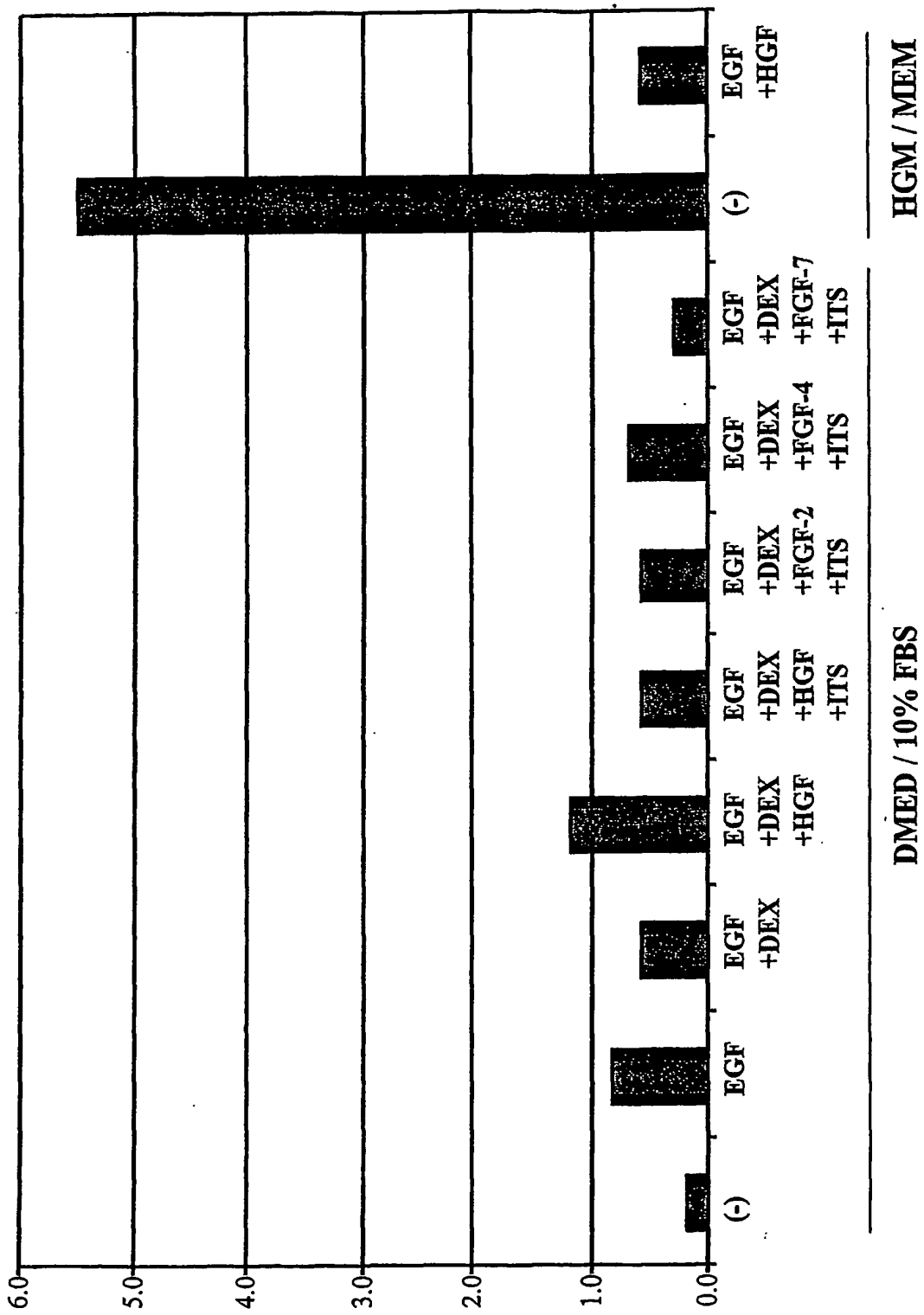

6.0
5.0
4.0
3.0
2.0
1.0
0.0
(-)
EGF
EGF +DEX
EGF +DEX +HGF
EGF +DEX +HGF +ITS
EGF +DEX +FGF-2 +ITS
EGF +DEX +FGF-4 +ITS
EGF +DEX +FGF-7 +ITS
(-)
EGF +HGF
DMED / 10% FBS
HGM / MEM

Figure 11

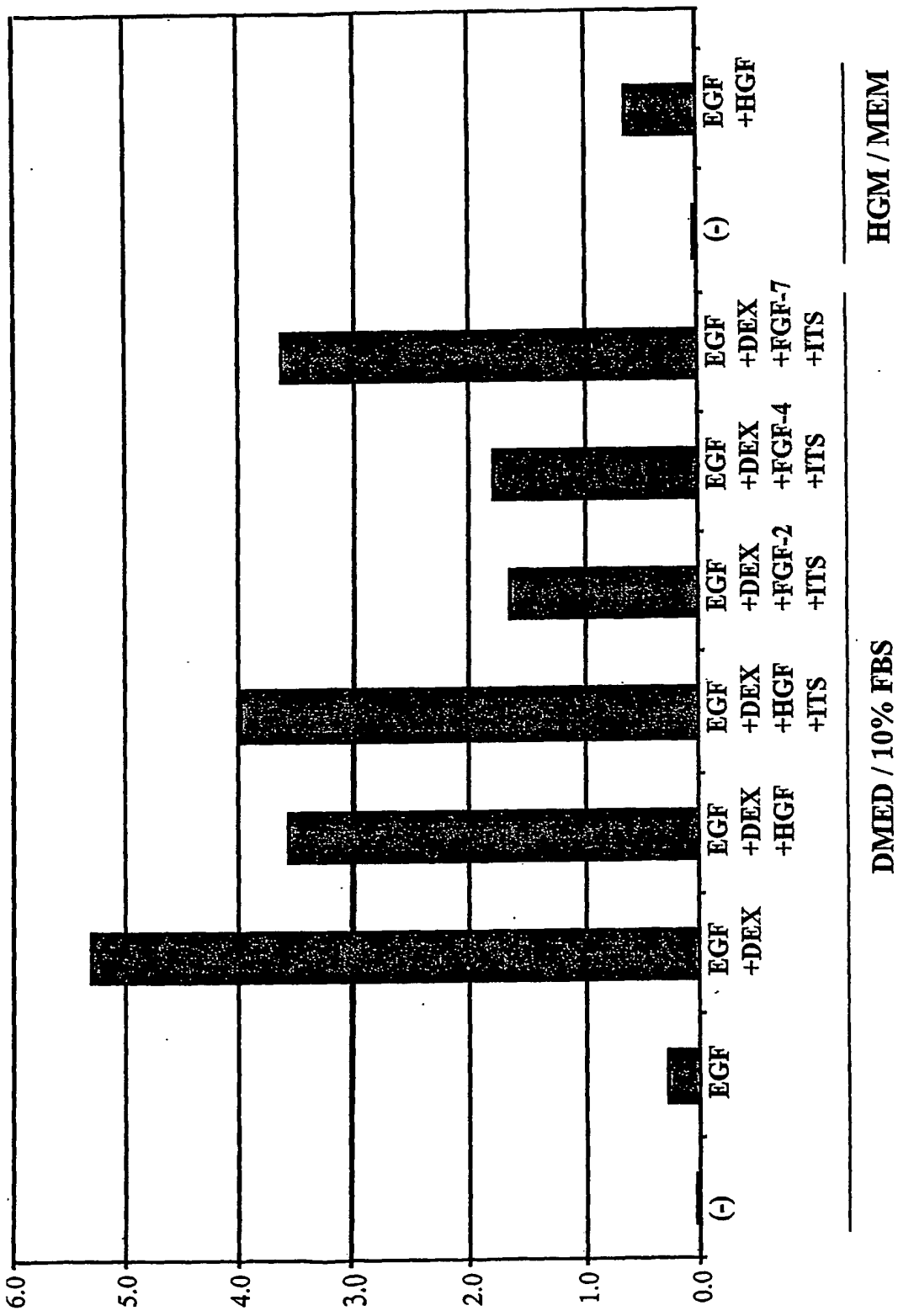

6.0
5.0
4.0
3.0
2.0
1.0
0.0
(-)
EGF
EGF +DEX
EGF +DEX +HGF
EGF +DEX +HGF +ITS
EGF +DEX +FGF-2 +ITS
EGF +DEX +FGF-4 +ITS
EGF +DEX +FGF-7 +ITS
(-)
EGF +HGF
DMED / 10% FBS
HGM / MEM

Figure 12

Figure 13A

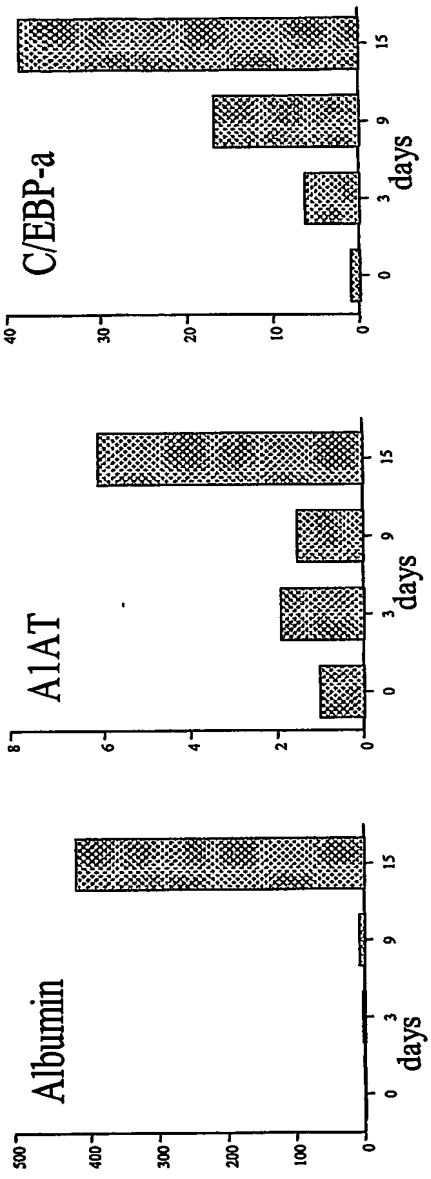

Albumin
500
400
300
200
100
0
0
3
9
15
days
A1AT
8
6
4
2
0
0
3
9
15
days
C/EBP-a
40
30
20
10
0
0
3
9
15
days

Figure 13B

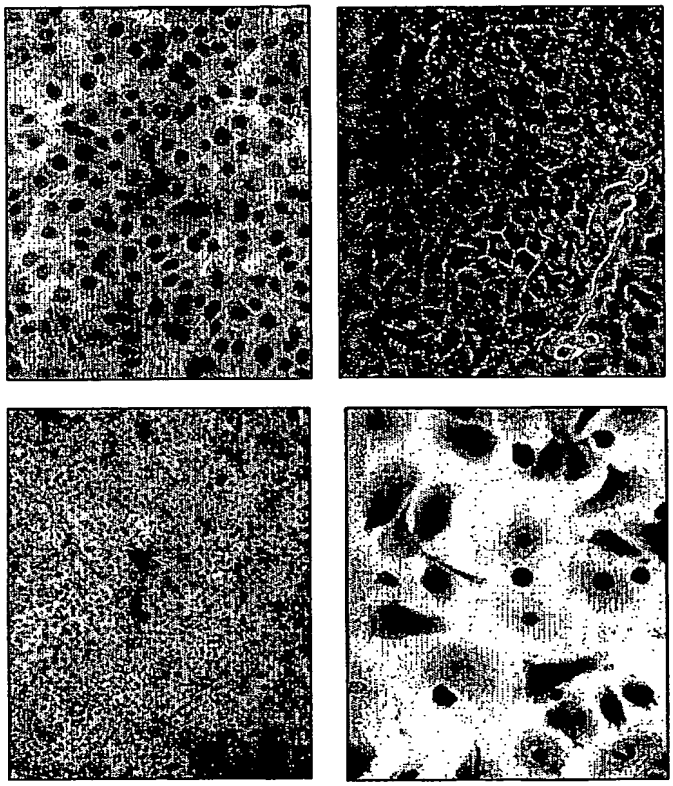


Figure 13C

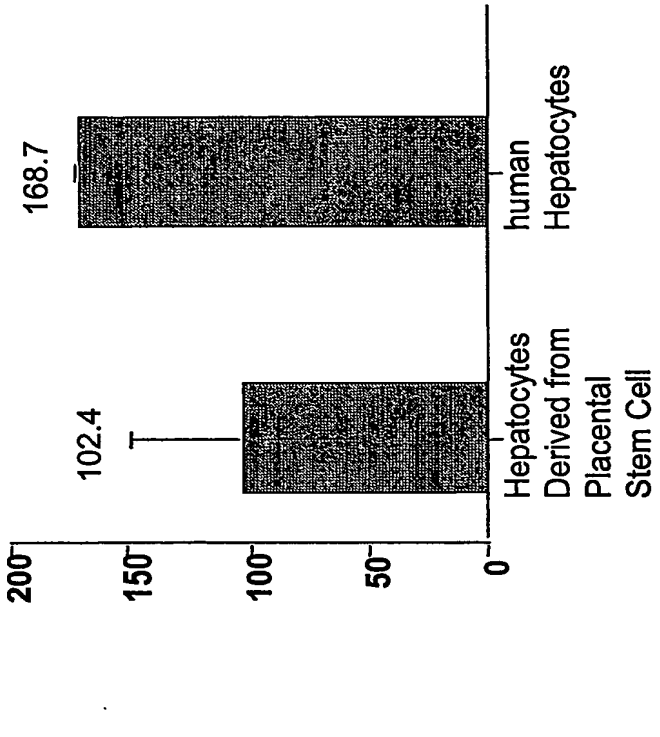

200
150
100
50
0
102.4
168.7
Hepatocytes Derived from Placental Stem Cell
human Hepatocytes

Figure 13D

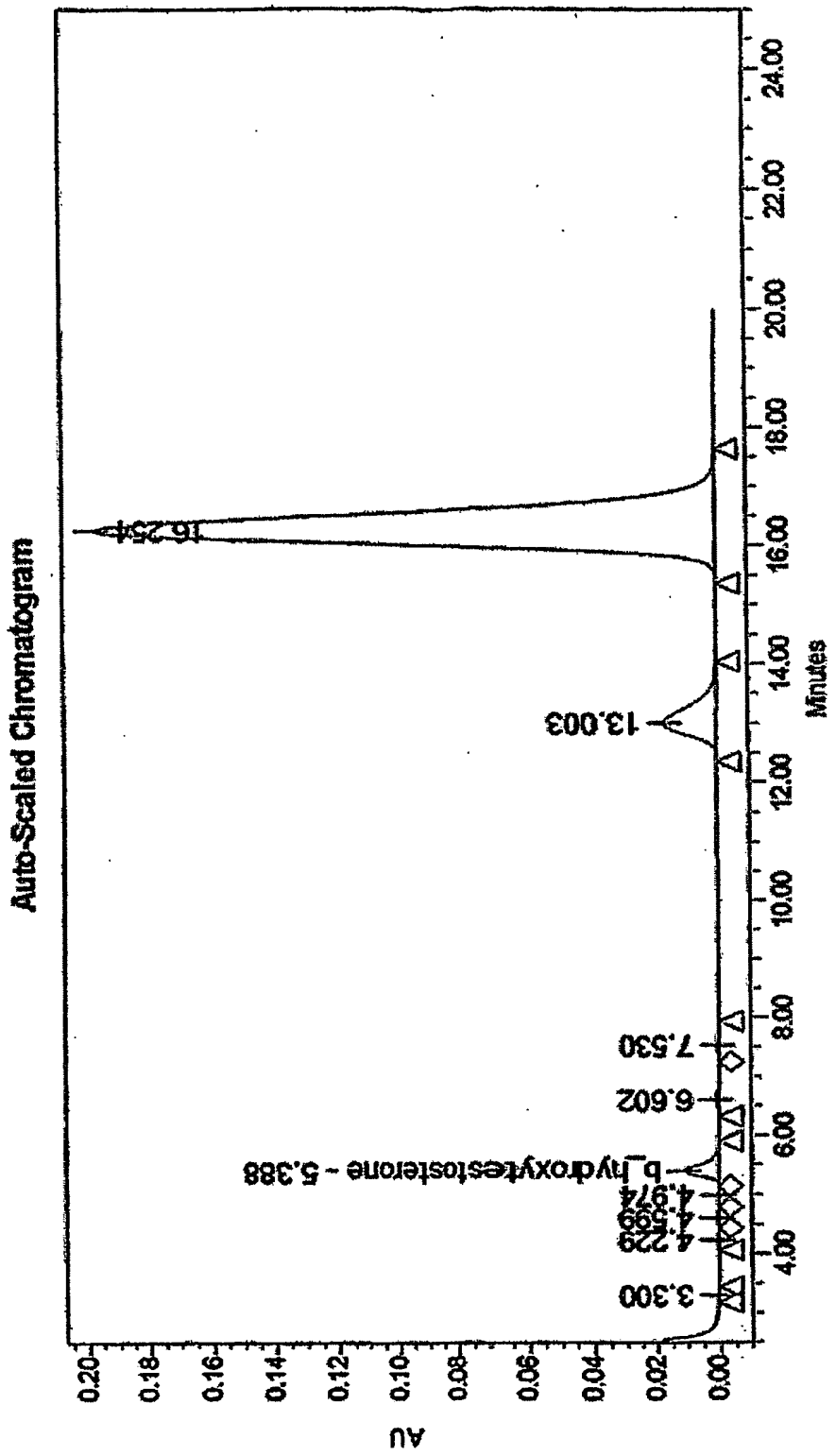

Auto-Scaled Chromatogram
AU
Minutes
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
4.00
6.00
8.00
10.00
12.00
14.00
16.00
18.00
20.00
22.00
24.00
3.300
4.229
4.599
4.974
b_hydroxytestosterone - 5.388
6.602
7.530
13.003
16.254

Figure 14

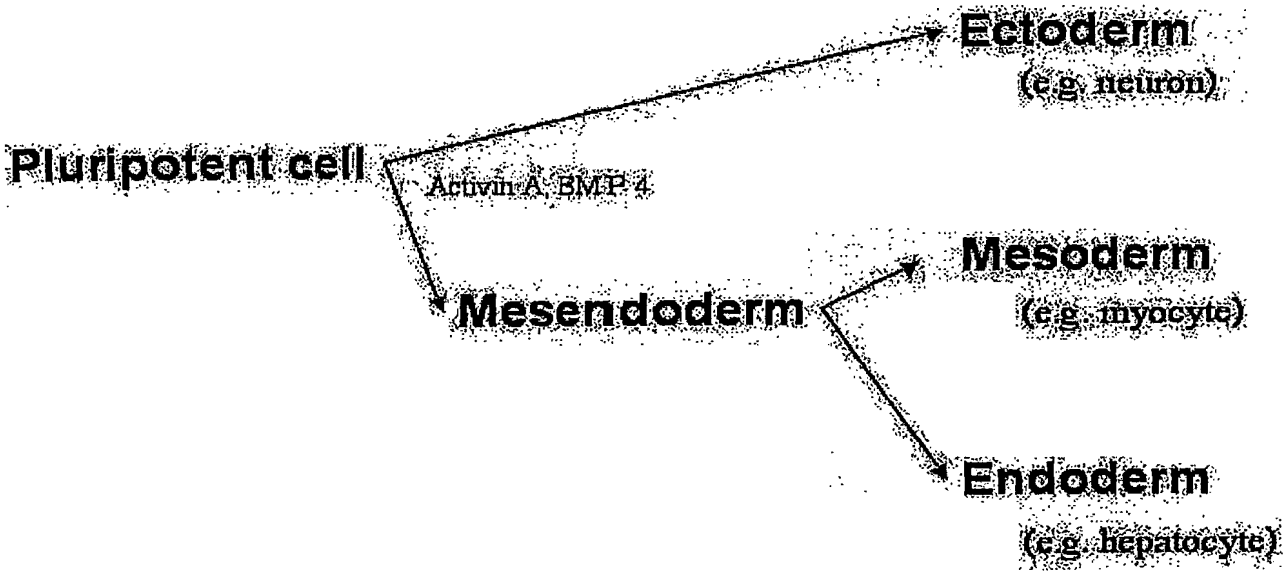

Ectoderm
(e.g. neuron)
Pluripotent cell
Activin A, BMP 4
Mesendoderm
Mesoderm
(e.g. myocyte)
Endoderm
(e.g. hepatocyte)

Figure 15

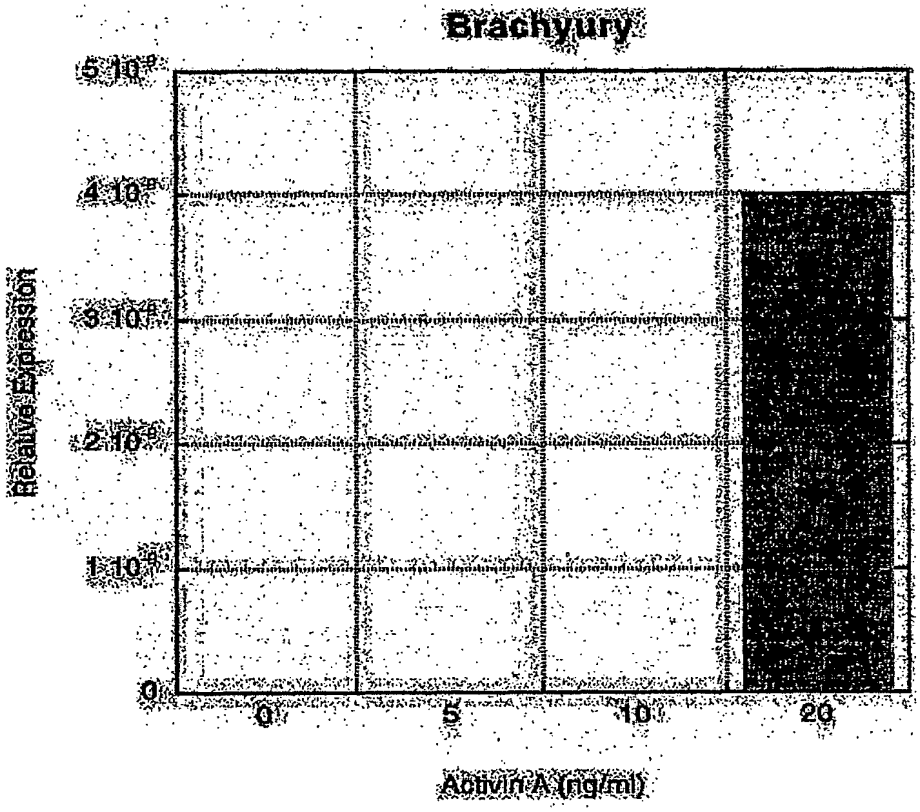

Brachyury
5 10⁻³
4 10⁻³
3 10⁻³
2 10⁻³
1 10⁻³
0
Relative Expression
0
5
10
20
Activin A (ng/ml)

Figure 16

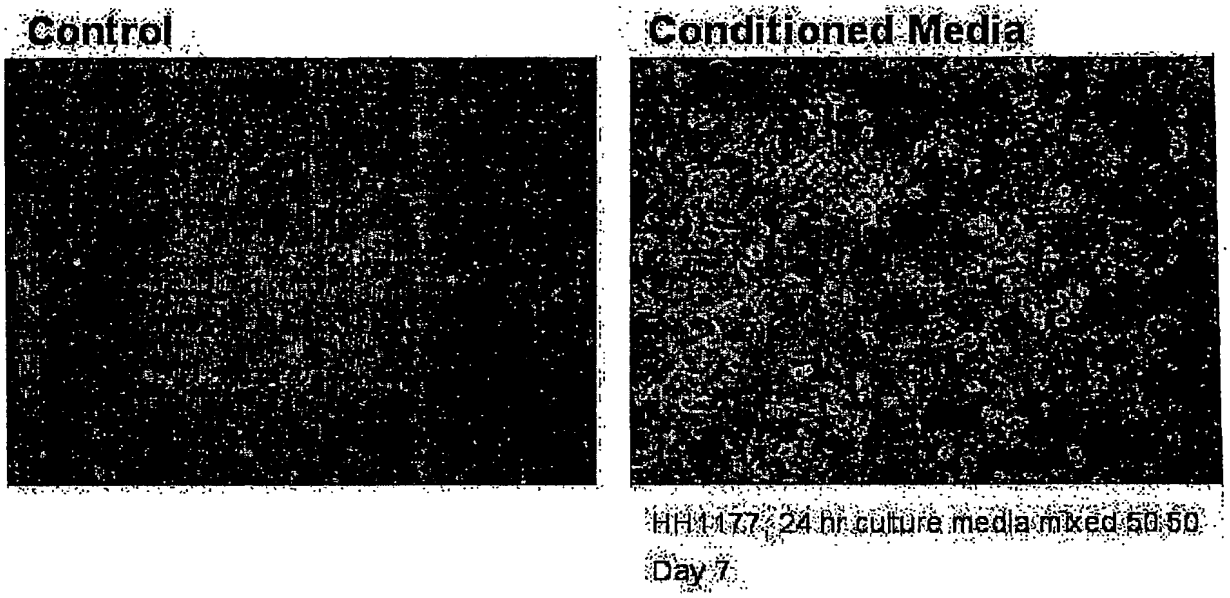
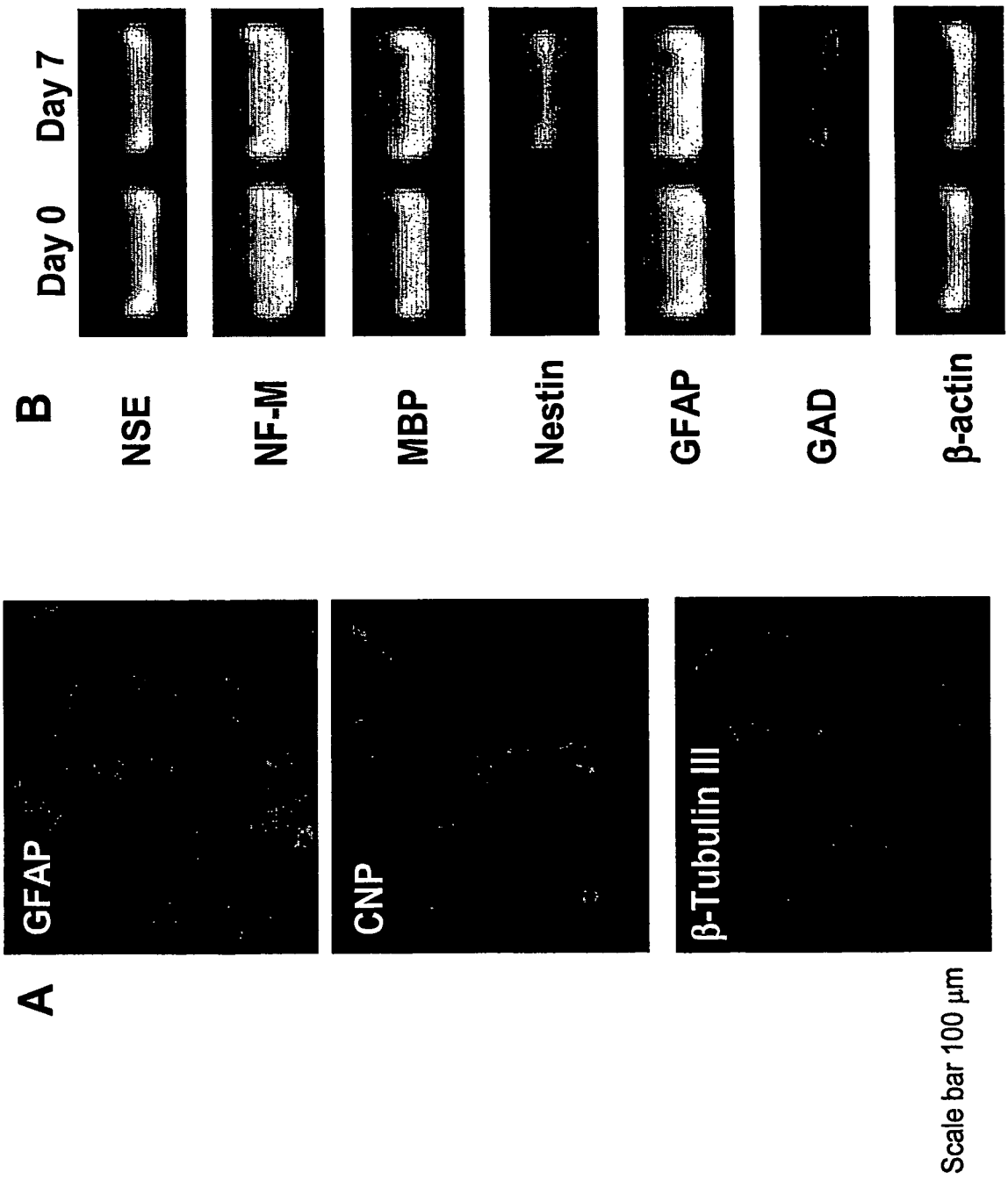

Control
Conditioned Media
HH1177 24 hr culture media mixed 50 50
Day 7

Figure 17


A
GFAP
CNP
β-Tubulin III
Scale bar 100 μm
B
Day 0
Day 7
NSE
NF-M
MBP
Nestin
GFAP
GAD
β-actin

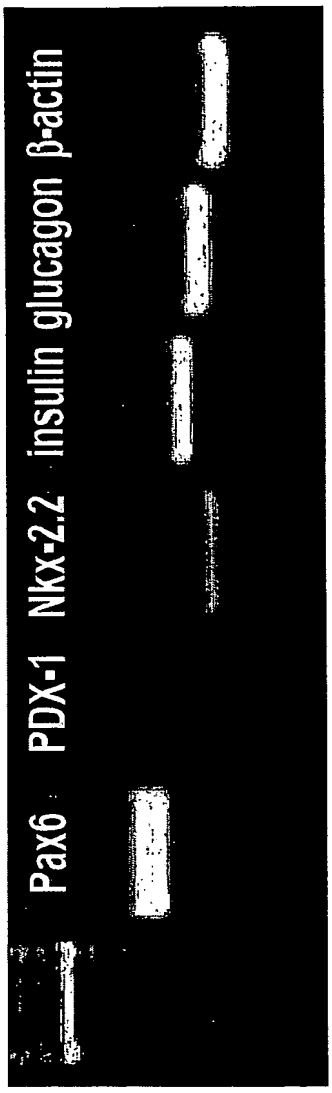
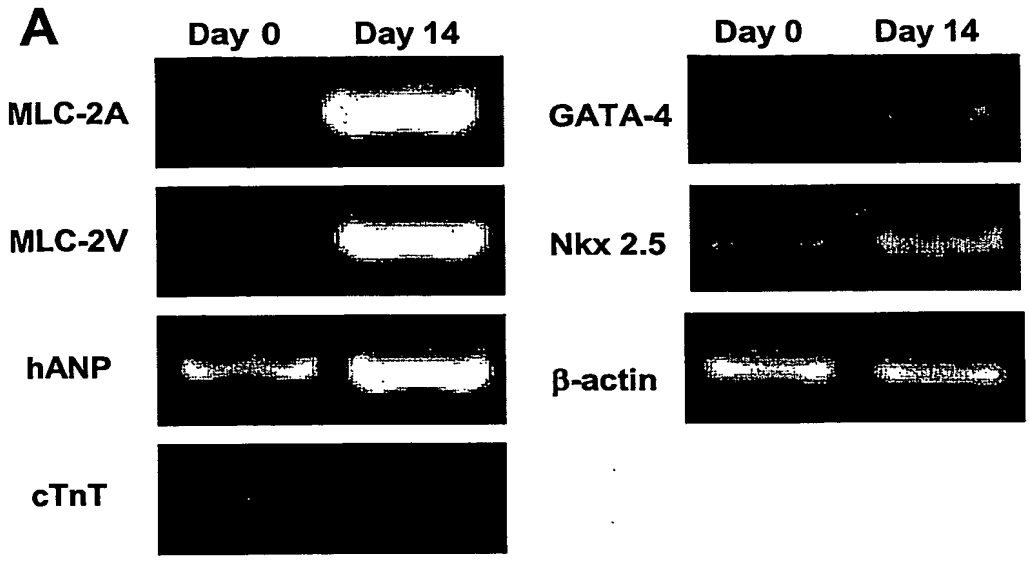


Figure 18

Figure 19


A
Day 0
Day 14
MLC-2A
MLC-2V
hANP
cTnT
Day 0
Day 14
GATA-4
Nkx 2.5
β-actin

B
α-actinin
Scale bar
50 μm

Figure 20

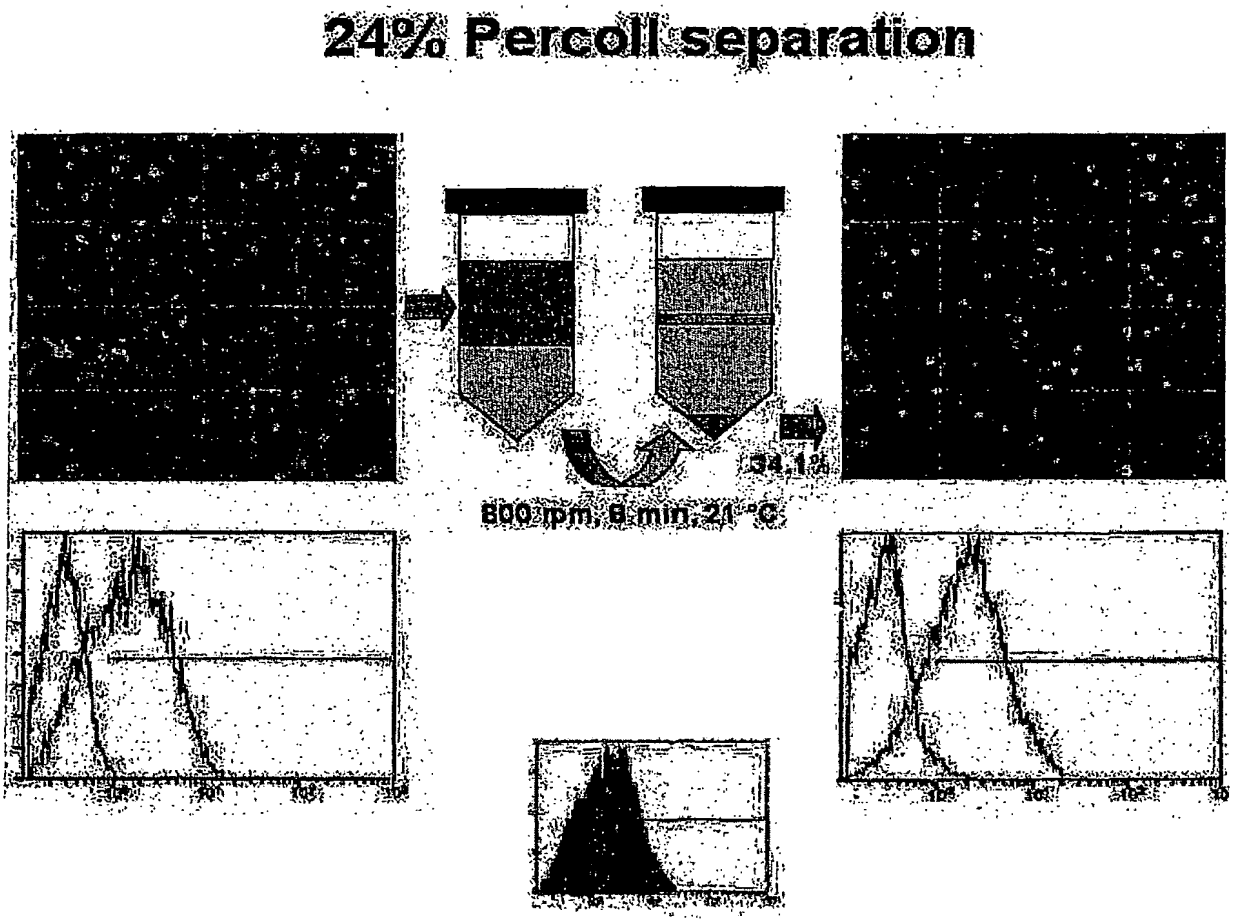


Figure 21

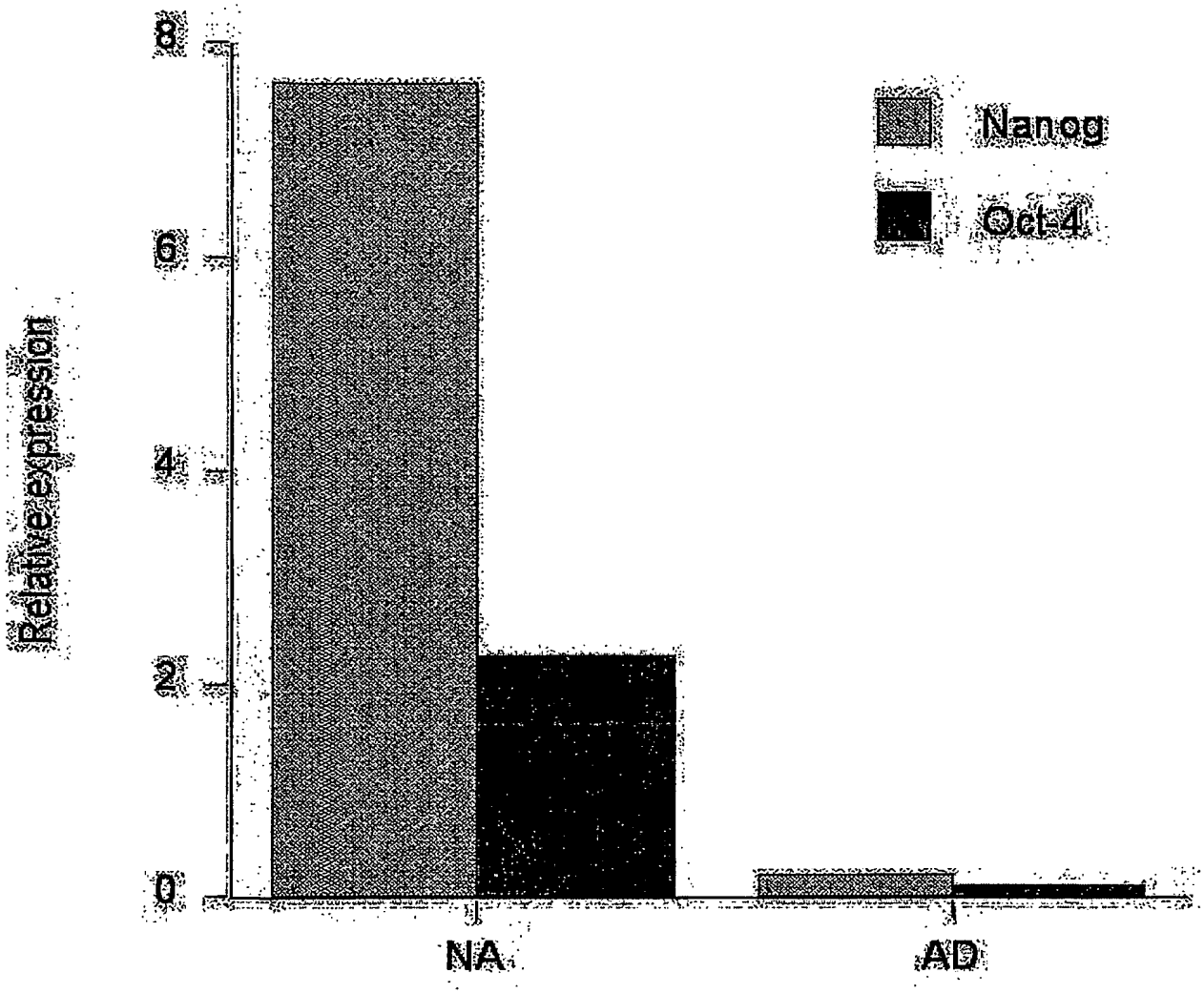


Figure 22A

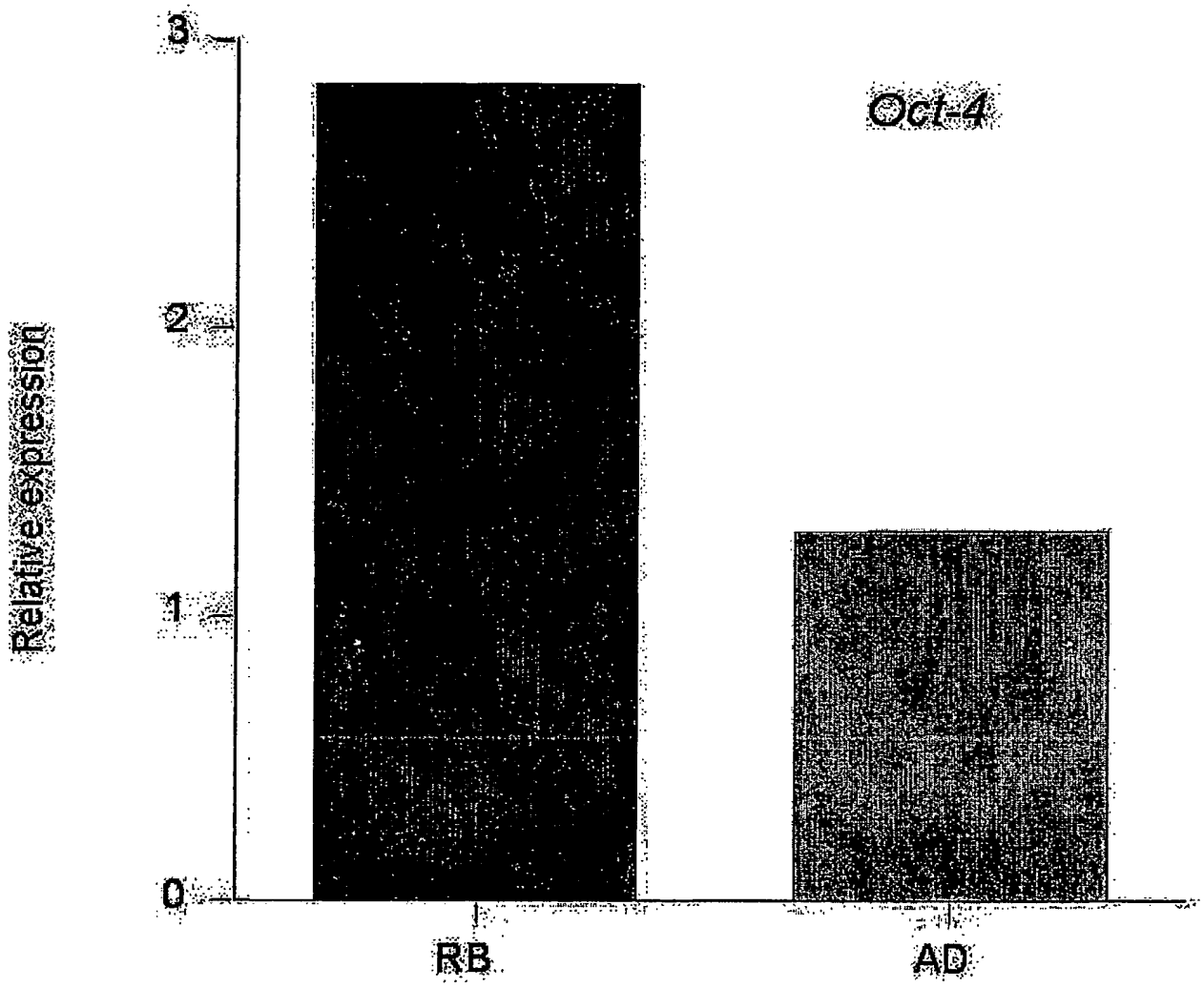


Figure 22B

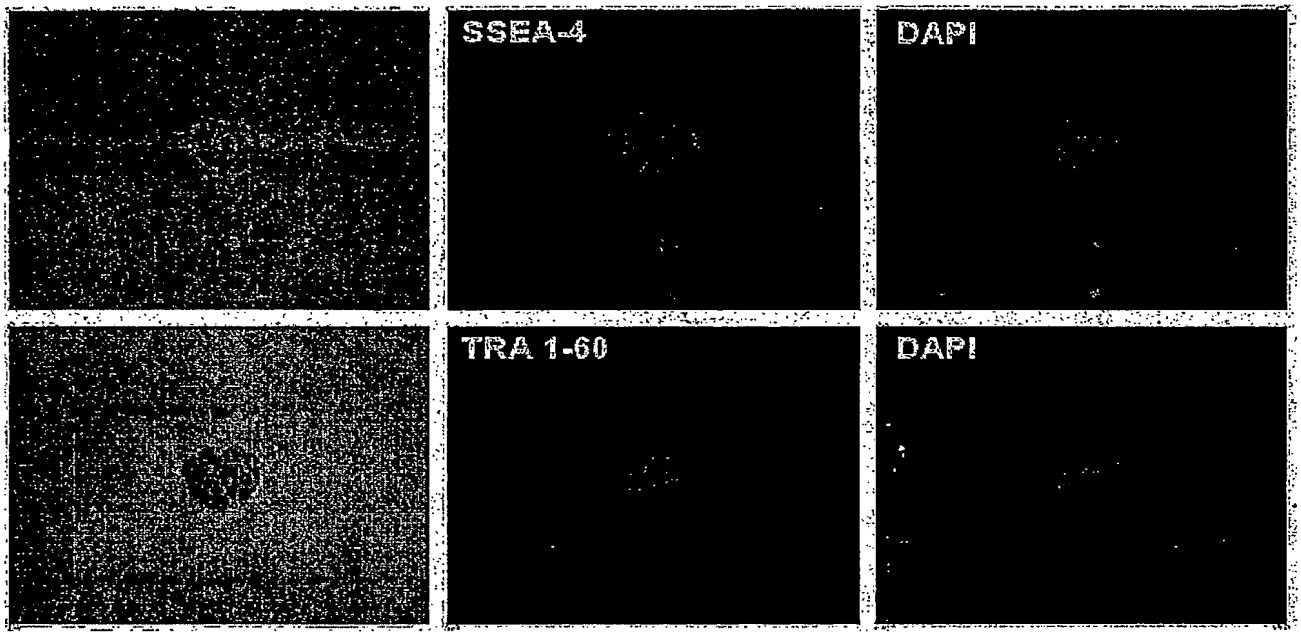
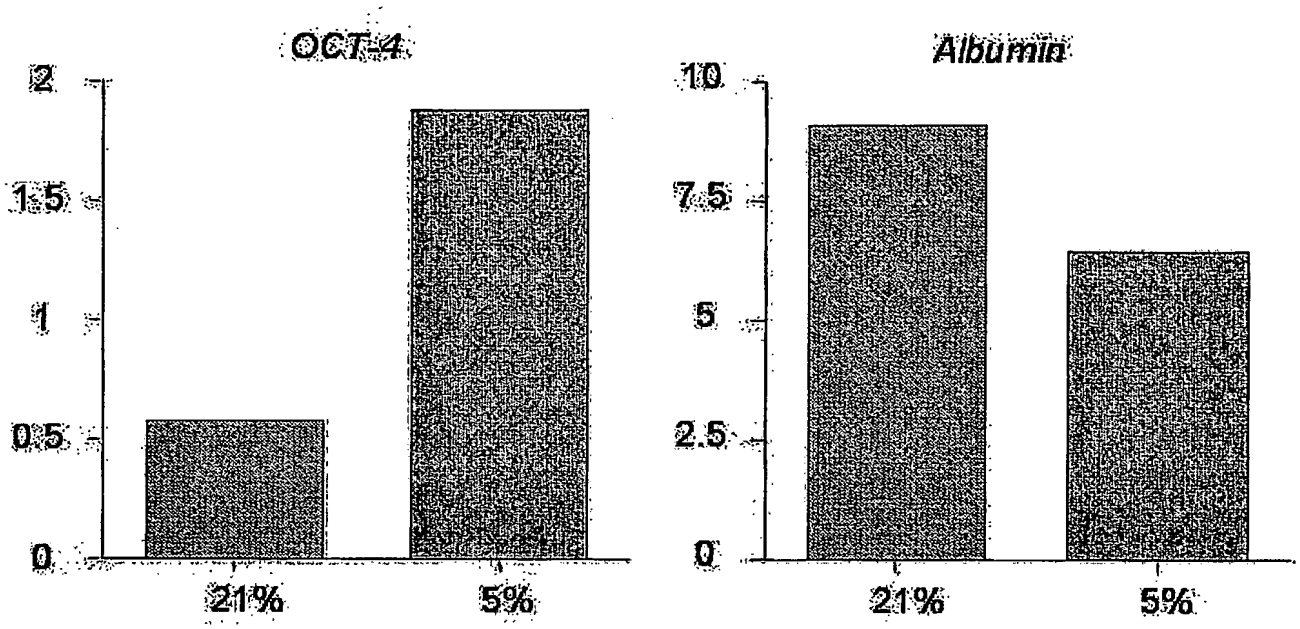


Figure 23



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